

HP StorageWorks Modular Smart Array 20 Installation Overview



System Requirements

For information about enclosure compatibility and supported hard drives, refer to

<http://www.hp.com>

Safety Information



WARNING: To reduce the risk of personal injury or damage to the equipment, consult the safety information and user documentation provided in the enclosure kit before attempting the installation.

Regulatory Notice

The rating label on the device gives the class (A or B) of the equipment. Class B devices have an FCC logo or ID on the label. Class A devices do not have an FCC logo or ID on the label. After you have determined the device class, refer to the *HP StorageWorks Modular Smart Array 20 User Guide* for complete regulatory compliance notices. This user guide is provided in the enclosure kit as a file on the Documentation CD.

Getting Help

If you cannot find the information that you need in this overview, there are several other resources that you can use to get more detailed information.

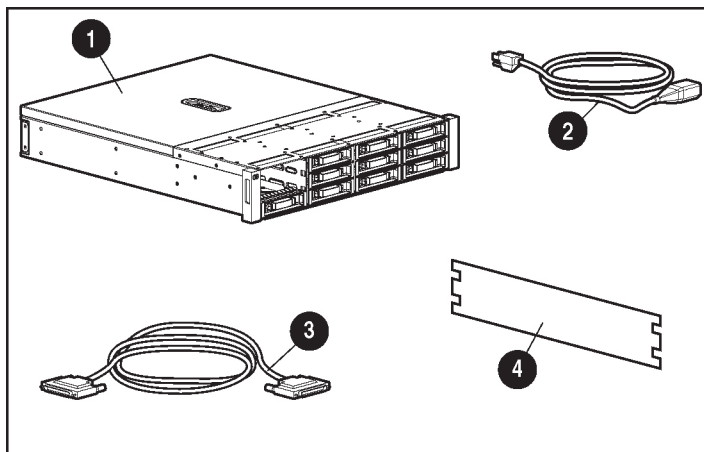
- The *HP StorageWorks Modular Smart Array 20 User Guide*
- The HP website, <http://www.hp.com>
- Your nearest HP authorized reseller (locations and telephone numbers of these resellers are given on the HP website)
- HP technical support telephone numbers:
 - In North America, 1-800-633-3600
 - For other regions, telephone numbers are given on the HP website.

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Kit Contents

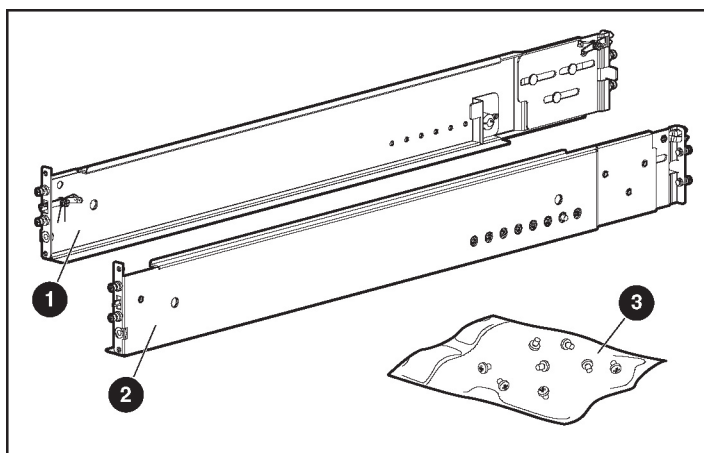


Item Description

- | | |
|----|--|
| 1 | Modular Smart Array 20 (MSA20) enclosure with drive blanks |
| 2 | Power cable (two present in kit) |
| 3 | VHDCI cable |
| 4 | 2U rack mounting template |
| 5* | Rack mounting hardware kit (see next section) |
| 6* | Documentation CD |
| 7* | Any printed documentation required |
| 8* | Two cables for connecting to power distribution units (PDUs) |

*Not illustrated

Rack Mounting Hardware Kit



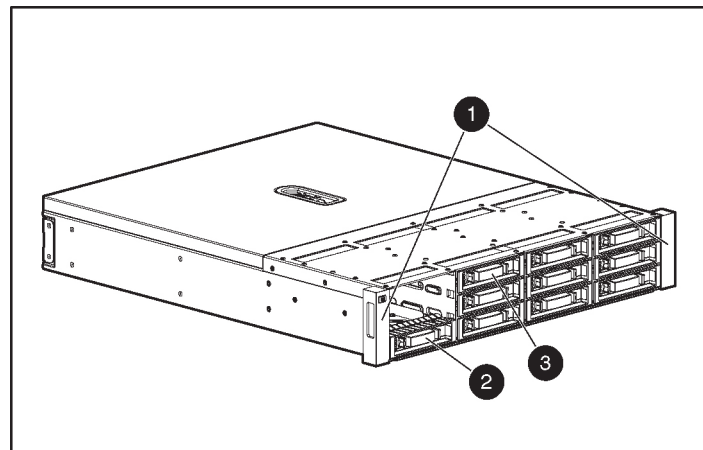
Item Description

- | | |
|---|---|
| 1 | Left rack rail |
| 2 | Right rack rail |
| 3 | Packet of 8 pins for round-hole rack conversion |

HP supports using the HP 10000 Series racks and the HP System E racks with the MSA20 enclosure. Other racks might also be suitable, but have not been tested with the MSA20.

Identifying Enclosure Components

Front Components

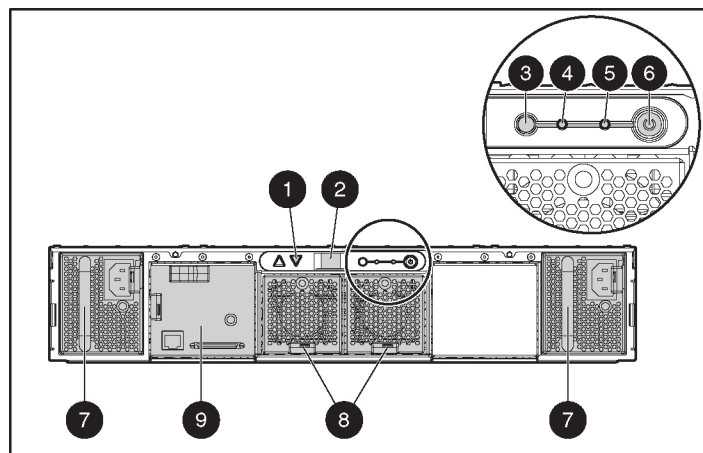


Item Description

- | | |
|---|--------------------------------------|
| 1 | Mounting bracket covers (bezel ears) |
| 2 | Drive blank in bay 3 |
| 3 | Drive blank in bay 4 |

NOTE: The enclosure is shipped with 10 drive blanks.

Rear Components



Item Description

- | | |
|---|---|
| 1 | Arrow buttons (for future use) |
| 2 | Enclosure ID display—Indicates the box ID number assigned to the enclosure during drive configuration |
| 3 | Unit identification button—Causes the blue LED on all drives in the enclosure to be illuminated |
| 4 | Enclosure Monitor status LED—Glows green to indicate that the enclosure monitor (Global Service Indicator, or GSI) is functional. |
| 5 | Enclosure fault LED—Glows amber when any other LED in the enclosure is amber, if the GSI is functional |
| 6 | Enclosure power button |
| 7 | Power supply units |
| 8 | Fan assemblies |
| 9 | Controller module |

Selecting the Enclosure Environment

Before installing the enclosure in a rack, select a location that meets the environmental requirements described in the *HP StorageWorks Modular Smart Array 20 User Guide*.

For adequate airflow within the rack, use appropriate high-airflow inserts in rack cabinet doors and observe industry-standard practices for adequate spacing between racks or rows of racks.

For more information about setting up the rack, refer to the rack user guide.

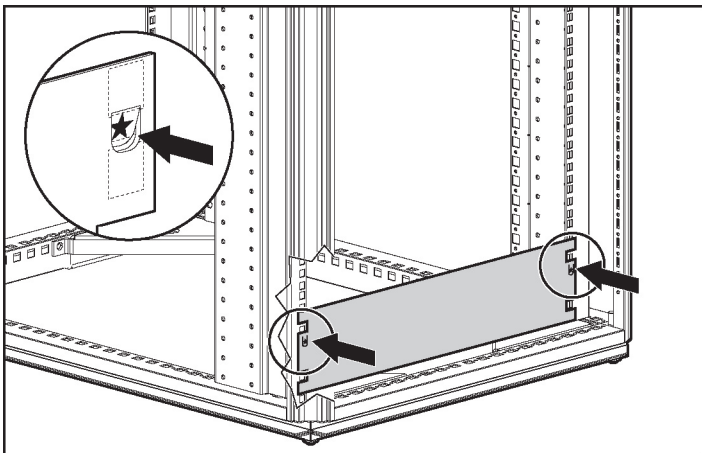
Installing the Enclosure in a Rack

1. Remove the enclosure components to reduce the enclosure weight and make it more manageable.



WARNING: The enclosure weighs 24 kg (53 lb) when full, and 9 kg (20 lb) when the components have been removed. Use two people to move an enclosure or to install one in a rack.

2. Use the rack mounting template as a guide to mark where in the rack the rails for the enclosure are to be located.
 - a. At the front of the rack, with the front of the template facing you, align the lower edge of the template with the bottom of the rack (or the top of the previous rack component). Be sure that the lower edge of the template is level.
 - b. Push the template tabs into the holes in the rack uprights to hold the template in place.

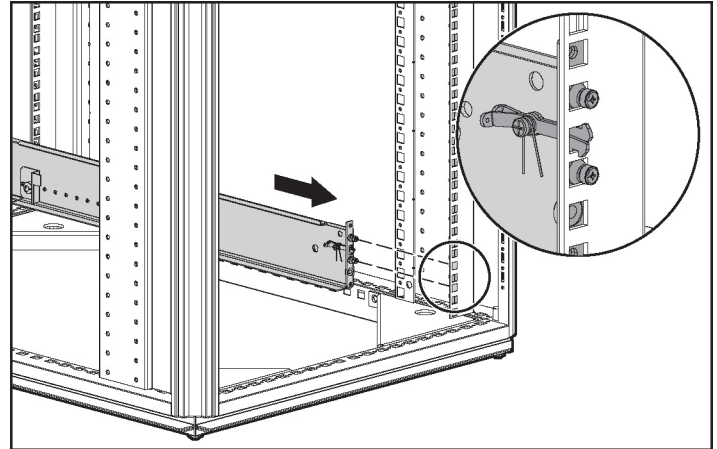


- c. Use a marker pen to indicate the holes in the rack uprights into which the scissor-like locking latches are to be inserted, as specified by the template.
 - d. Repeat these steps to mark the back of the rack, using the information on the back of the template as a guide to the required location of the locking latches in this case.
3. If the holes in the rack uprights are round instead of square, remove the standard pins from the rails and replace them with the round-hole pins provided in the rack mounting hardware kit.

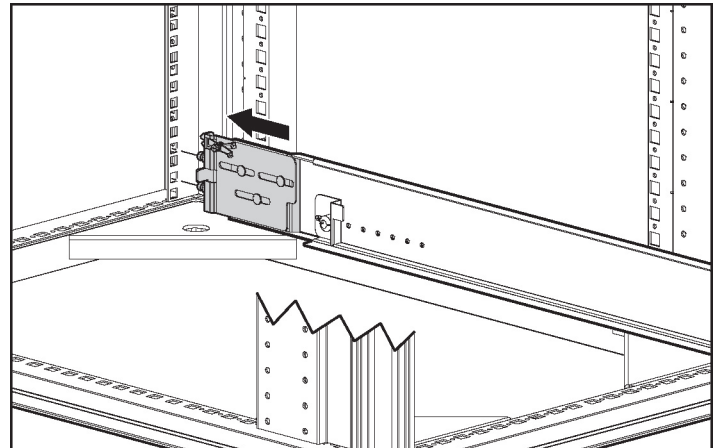


WARNING: The pins in the rails are load-bearing. Do not remove the pins except to replace them with the pins for round-hole racks.

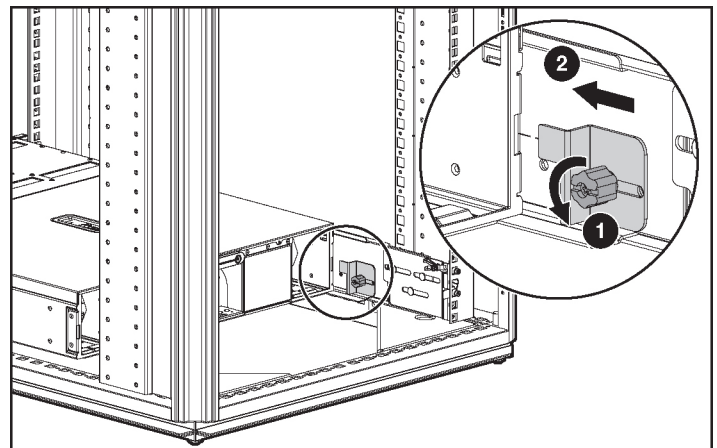
4. Identify the left (L) and right (R) rack rails by markings stamped into the rails.
5. Slide the front end of the right rack rail toward the inside front of the rack until the locking latch engages with the marked hole in the front rack upright.



6. Extend the back end of the rail toward the inside rear of the rack until the locking latch engages with the marked hole in the rear rack upright.

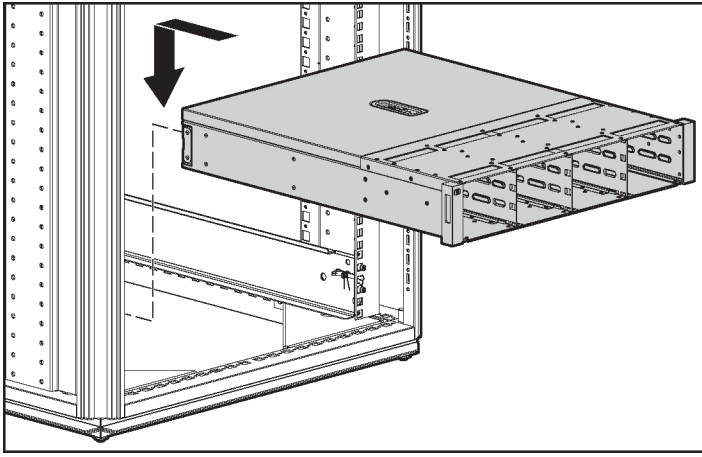


7. Loosen the locknut on the shipping bracket (1), and move the bracket to the rearmost position on the rail (2).

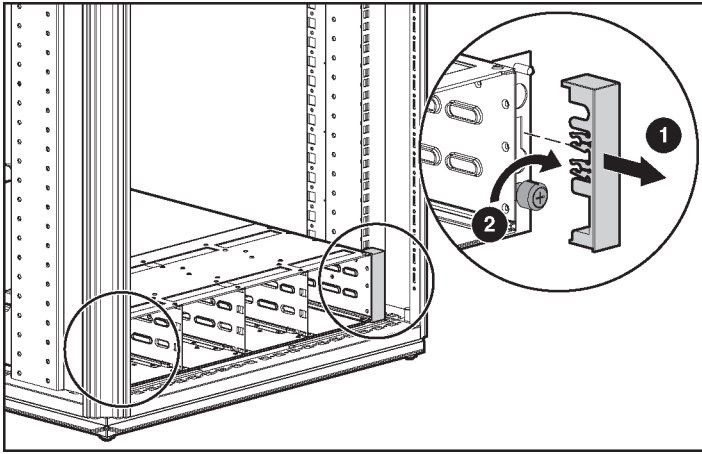


8. Repeat steps 5 through 7 for the left rack rail.

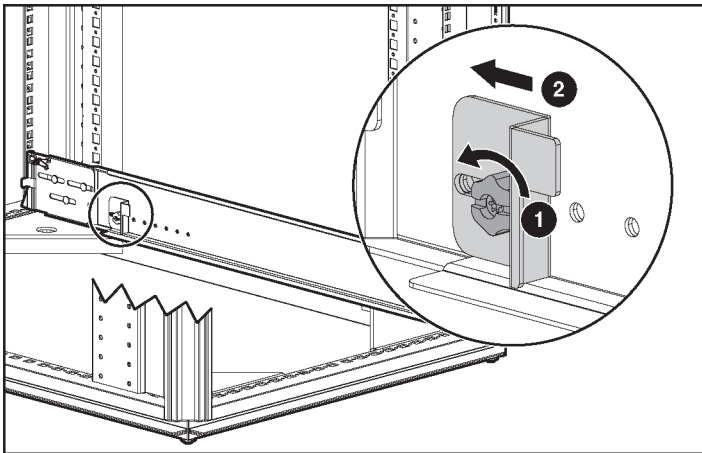
9. Align the enclosure with the rails, and slide it into the rack.



10. Remove the mounting bracket covers (1), and tighten the thumbscrews to secure the enclosure to the rack (2).



11. Replace the mounting bracket covers.
12. If you intend to move the rack while the enclosure is installed, adjust the shipping brackets on each rail to secure the enclosure in the rack.
- Loosen the shipping bracket locknut (1).
 - Slide the bracket forward until it engages with the enclosure chassis (2).



- Tighten the locknut.
- Repeat this procedure for the other rail.

Completing the Installation

- Reinstall the components in the enclosure.
- Connect the VHDCI connector on the controller module to the output of an MSA1500 cs or to the external connector of a sixth-generation Smart Array controller in a server.
- Connect the AC input socket of each power supply unit to separate AC power sources.



WARNING: To reduce the risk of electrical shock or damage to the equipment:

- Do not disable the power cord grounding plug. The grounding plug is an important safety feature.
- Plug the power cord into a grounded (earthed) electrical outlet that is easily accessible at all times.
- Unplug the power cord from the power supply to disconnect power to the equipment.
- Do not route the power cord where it can be walked on or pinched by items placed against it. Pay particular attention to the plug, electrical outlet, and the point where the cord extends from the system.

- Press the enclosure power button on the rear of the unit.
- Confirm that the enclosure components are all functioning normally by observing the condition of their status LEDs, which should all be green. If the amber LED on any component is illuminated, the component needs attention. For detailed information about the meaning of different LED illumination patterns, refer to the *HP StorageWorks Modular Smart Array 20 User Guide*.

Installation is complete.